

REMARKS**Summary of the Office Action**

Claims 1-9 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Kawano et al. (US, 2001/002895).

Claims 1-9 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kawano et al. (US, 2003/0141441) in view of Sugiura et al. (JP, 05-197959).

Summary of the Response to the Office Action

Applicants respectfully traverse the rejection of claims at least for the following reasons.

All Claims Define Allowable Subject Matter**Rejection of claims under 35 U.S.C. § 102(b)**

Claims 1-9 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Kawano et al. (US, 2001/002895). Applicants respectfully traverse the rejection of claims at least for the following reasons.

On page 2 of the Action, the Office alleges that Kawano et al. '895 teaches "a high density recording/reproducing method (0039). A polarization sensitive layer 12 having a thickness of at least 10 micrometers is used (0090). Description of acceptable materials for the polarization sensitive layer 12 including disclosure of azo benzene is found at (0093-0095). Formation of a grating is described at (0097 and 0099). See embodiments 107 and figures 6-9." Applicants respectfully disagree.

Paragraphs [0093] to [0100] of Kawano et al. '895 disclose the hologram based on the light intensity modulation (light intensity hologram and polarization hologram) by exposing an interference pattern onto a polarization-sensitive member (azobenzene). The light intensity

modulation or the spatial polarization modulation generates the trans-form/cis-form of azobenzene molecules. As a result, a grating is formed as the hologram. Accordingly, Applicants respectfully submit that the invention of Kawano et al. '895 is related to the physical state classified as the volume grating (volume hologram).

On the other hand, the Applicants' claimed invention is directed to a method and medium wherein a material on a film is moved to form a relief pattern thereon by irradiating a light onto azobenzene. Thus, Applicants respectfully submit that Kawano et al. '895 fails to anticipate features recited in claims 1-9.

Rejection of claims under 35 U.S.C. § 103(a)

Claims 1-9 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kawano et al. (US, 2003/0141441) in view of Sugiura et al. (JP, 05-197959). Applicants respectfully traverse the rejection of claims at least for the following reasons.

On page 3 of the Action, the Office alleges that "Kawano et al. '441 teaches a method for forming a grating in a polarization sensitive material in embodiment 1 (0036-0049). Use of azobenzene (0048) and use of linearly polarized light (0061) are described." The Office further alleges that "Sugiura et al. teaches a high density recording method for forming a grating (abstract). Recording method is disclosed at (0008-0010)." As a result, the Office asserts that "it would have been obvious to one ordinary skill in the art to use the grating formation method taught by Sugiura et al. to form a grating in a polarization sensitive material layer containing azobenzene as disclosed by Kawano et al. '441 and with the reasonable expectation of forming a high density grating." Applicants respectfully disagree.

Similar to Kawano et al. '895 discussed earlier, Applicants respectfully submit that

Kawano et al. '441 is related to a volume hologram that is different from the principle and the configuration of the present invention. In addition, Applicants respectfully submit that Sugiura et al. discloses that each of the plurality of information pits is recorded at a spatially different position, and a predetermined number of such information pits clump (i.e., corresponds to a servo sector of Sugiura et al.) to record.

On the other hand, the Applicants' claimed invention discloses that a plurality of angle direction patterns is overwritten at a spatially same position, respectively having data (angle data). Accordingly, Applicants respectfully submit that the configuration of Sugiura et al. is different from the invention of the Applicants'. Applicants respectfully submit that the differences in the configuration between Sugiura et al. and the present invention directly result in the different data recording density per unit area. In the present invention, 12 or more angle gradation properties are realized. In addition, exponential numbers of data codes can be obtained by performing the angle gradation recording and the depth gradation recording at a spatially same point.

As indicated in MPEP §2143 (A), to establish a *prima facie* obviousness, there must be a finding that the prior art included each element claimed, a finding that one of ordinary skill in the art could have combined the elements as claimed by known methods, and that one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Accordingly, Applicants respectfully assert that the Office has not established a *prima facie* case of obviousness and that the rejection of claims under 35 U.S.C. §103(a) should be withdrawn.

Furthermore, Applicant respectfully submits that Sugiura et al. fails to cure the deficiencies of Kawano et al. '441.

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In light of the arguments presented above, Applicants respectfully request that the rejection of claims under 35 U.S.C. §§102(b) and 103(a) be withdrawn. Moreover, Applicants respectfully submit that dependent claims 2-4 and 6-9 are allowable with regard to one of independent claims 1 and 5 from which they respectfully depend, as well as the individual features that dependent claims 2-4 and 6-9 recite.

CONCLUSION

In view of the foregoing remarks, Applicants respectfully request reconsideration of this application, withdrawal of all rejections, and the timely allowance of all pending claims. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicants' undersigned representative to expedite prosecution.

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.R.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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